

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1-29. (Canceled)

30. (Previously Presented) A storage system, comprising:

a first storage device coupled to a first information processing device and having a first controller and a plurality of first disk drives, a first portion of said first disk drives being related to a first logical volume and a second portion of said first disk drives being related to a second logical volume;

said first controller having a first information indicating that said first logical volume functions as a primary logical volume and a second information indicating that said second logical volume functions as a logical volume being used to transfer data;

said first controller receiving data, which are sent from said first information processing device and are targeted to said first logical volume, and storing data corresponding to said data sent from said first information processing device in said first portion of said first disk drives and storing data corresponding to said data sent from said first information processing device in said second portion of said first disk drives and transferring data corresponding to said data stored in said second portion of said first disk drives to a second storage device ;

said second storage device coupled to a second information processing device and said first storage device and having a second controller and a plurality of second disk drives, a third portion of said second disk drives being related to a third logical volume and a fourth portion of said second disk drives being related to a fourth logical volume;

said second controller having a third information indicating that said third logical volume functions as a logical volume being used to receive data and a fourth information indicating that said fourth logical volume functions as a secondary logical volume forming a pair relationship with said primary logical volume; and

said second controller receiving said data transferred from said first controller and storing data corresponding to said data transferred from said first controller in said third portion of said second storage device and storing data corresponding to said data stored in said third portion of said second disk drives in said fourth portion of said second storage device;

wherein said first storage device and said second storage device change said first information, said second information, said third information and said fourth information based on at least one command sent from said second information processing device so that said second information processing device sends data targeted to said fourth logical volume, if said first information processing device has a failure,

wherein said changed first information indicates that said first logical volume now functions as said secondary logical volume,

wherein said changed second information indicates that said second logical volume now functions as said logical volume being used to receive data,

wherein said changed third information indicates that said third logical volume now functions as said logical volume being used to transfer data, and

wherein said changed fourth information indicates that said fourth logical volume now functions as said primary logical volume.

31. (Previously Presented) A storage system according to claim 30,
wherein:

said first and/or second controller have a pair management information of relationship with said first logical volume and said fourth logical volume.

32. (Previously Presented)

A storage system according to claim 30, wherein:

said first and/or second controller have a pair management information, which indicates whether it is under copying data from said first logical volume to said fourth logical volume or not.

33. (Previously Presented) A storage system according to claim 30,
wherein:

said first and/or second controller have a pair management information of whether it is under restoring data from said first logical volume to said fourth logical volume or not.

34. (Previously Presented) A storage system according to claim 30, wherein:

said first controller has a pair management information of relationship between said first logical volume and said second logical volume.

35. (Previously Presented) A storage system according to claim 30, wherein:

said first and/or second controller have a pair management information, which indicates whether it is under copying data from said fourth logical volume to said first logical volume or not.

36. (Previously Presented) A storage system according to claim 30, wherein:

said first controller has a pair management information of whether it is under copying data corresponding to said first logical volume to said second logical volume or not.

37. (Previously Presented) A storage system according to claim 30,
wherein:

said second information processing device sends said command, which are used to change a pair management information including said first information, said second information, said third information and said fourth information.

38. (Previously Presented) A storage system according to claim 30,
wherein:

said first controller manages a plurality of regions in said second portion of said first disk drives stored data, which will be transferred from said second logical volume to said third logical volume, before changing said first information, said second information, said third information and said fourth information.

39. (Previously Presented) A storage system according to claim 30,
wherein:

said second controller manages a plurality of regions in said third portion of said second disk drives stored data, which will be stored from said third logical volume to said fourth logical volume, by at least one pointer before changing said first information, said second information, said third information and said fourth information.

40. (Previously Presented) A storage system according to claim 30,
wherein:

said first controller manages a plurality of regions in said second portion of said first disk drives stored data, which will be transferred from said second logical volume to said third logical volume, by at least one pointer before changing said first information, said second information, said third information and said fourth information, and

said regions stored data include a plurality of regions in which said data corresponding to said data sent from said first information processing device are under storing by said first controller.

41. (Previously Presented) A storage system according to claim 30,
wherein:

said second controller manages a plurality of regions in said third portion of said second disk drives in which said data sent from said first controller are under storing by said second controller , before changing said first information, said second information, said third information and said fourth information.

42. (Previously Presented) A storage system according to claim 30,
wherein:

said second controller transfers said command sent from said second information processing device to said first storage device based on contents of said first command.

43. (Canceled)

44. (Previously Presented) A storage system according to claim 30, wherein:

said second controller transfers said command sent from said second information processing device to said first storage device, if an address of said command sent from said second information processing device is a certain address of a fifth logical volume.

45. (Previously Presented) A storage system according to claim 30, wherein:

said command sent from said second information processing device has an information, which is used to identify said third logical volume from a plurality of logical volumes.

46. (Previously Presented) A storage system according to claim 30, wherein:

each of said logical volumes has a logical unit number, which is used to identify a logical volume from a plurality of logical volumes; and

said command sent from said second information processing device has an information of a plurality of said logical unit number corresponding to said third and fourth logical volumes.

47. (Previously Presented) A storage system according to claim 30, wherein:

said second controller executes contents of said command sent from said second information processing device, if said command sent from said second information processing device does not have an information of said first storage device.

48. (Previously Presented) A storage system, comprising:

a first storage device coupled to a first information processing device and having a plurality of first disk drives, a first portion of said first disk drives being related to a first logical volume and a second portion of said first disk drives being related to a second logical volume;

a first controller having a first information indicating that said first logical volume functions as a primary logical volume and a second information indicating that said second logical volume functions as a logical volume being used to transfer data;

a second storage device coupled to a second information processing device and said first storage device and having a plurality of second disk drives, a third portion of said second disk drives being related to a third logical volume and a fourth portion of said second disk drives being related to a fourth logical volume; and

a second controller having a third information indicating that said third logical volume functions as a logical volume being used to receive data and a fourth information indicating that said fourth logical volume functions as a secondary logical volume corresponding to said primary volume,

wherein said first controller receives data sent from said first information processing device to said first logical volume and storing said data sent from said first information processing device in said first logical volume and storing data corresponding to said data sent from said first information processing device in said second logical volume and transferring said data stored in said second logical volume to a second storage device.

wherein said second controller receiving said data transferred from said first controller and storing said data transferred from said first controller in said third logical volume and storing data corresponding to said data stored in said third logical volume in said fourth logical volume,

wherein said first storage device and said second storage device change said first information, said second information, said third information and said fourth information based on at least one command sent from said second information processing device, if said first information processing device has a failure,

wherein said changed first information indicates that said first logical volume now functions as said secondary logical volume,

wherein said changed second information indicates that said second logical volume now functions as said logical volume being used to receive data,

wherein said changed third information indicates that said third logical volume now functions as said logical volume being used to transfer data,

wherein said changed fourth information indicates that said fourth logical volume now functions as said primary logical volume,

wherein said second controller, after changing said third information and said fourth information, receives data sent from said second information processing device to said fourth logical volume and stores said data sent from said second information processing device in said fourth logical volume and stores data corresponding to said data sent from said second information processing device in said third logical volume and transfers said data stored in said third logical volume to said first storage device, and

wherein said first controller, after changing said first information and said second information, receives said data transferred from said second controller and stores said data transferred from said second controller in said second logical volume and stores data corresponding to said data stored in said second logical volume in said first logical volume.

49. (Previously Presented) A storage system according to claim 30,
wherein:

said second controller manages a plurality of regions in said third portion of said second disk drives in which data stored in said third portion of said second disk drives are under storing from said third portion of said second disk drives in said fourth portion of said second disk drives by said second controller.

50. (Previously Presented) A storage system according to claim 30,
wherein:

said second controller, after changing said third information and said fourth information, receives data sent from said second information processing device to said fourth logical volume and stores data corresponding to said data sent from said second information processing device in said fourth portion of said second disk drives and stores data corresponding to said data sent from said second information processing device in said third portion of said second disk drives and transfers data corresponding to said data stored in said third portion of said second disk drives to said first storage device.

51. (Previously Presented) A storage system according to claim 30,
wherein:

said second controller, after changing said third information and said fourth information, receives data sent from said second information processing device to

said fourth logical volume and stores data corresponding to said data sent from said second information processing device in said fourth portion of said second disk drives and stores data corresponding to said data sent from said second information processing device in said third portion of said second disk drives and transfers data corresponding to said data stored in said third portion of said second disk drives to said first storage device, and

said first controller, after changing said first information and said second information, receives said data transferred from said second controller and stores data corresponding to said data transferred from said second controller in said second portion of said first storage device and stores data corresponding to said data stored in said second portion of said first disk drives in said first portion of said first storage device.

52. (Previously Presented) A storage system according to claim 30, wherein:

said data stored in said second logical volume is appended an update information, which is used to maintain a consistency when said data stored in said third portion of said second disk drives are stored in said fourth portion of said second disk drives.

53. (Previously Presented) A storage system according to claim 30, wherein:

said second logical volume and said third logical volume each function as a journal volume in which a journal data stored.

54. (Previously Presented) A storage system, comprising:

a first storage device coupled to a first information processing device and having a first controller and a plurality of first disk drives, a first portion of said first disk drives being related to a first logical volume and a second portion of said first disk drives being related to a second logical volume;

said first controller having a first information indicating that said second logical volume functions as a logical volume being used to transfer data;

said first controller receiving data sent from said first information processing device to said first logical volume and storing said data sent from said first information processing device in said first logical volume and storing data corresponding to said data sent from said first information processing device in said second logical volume and transferring said data stored in said second logical volume to a second storage device;

said second storage device coupled to a second information processing device and said first storage device and having a second controller and a plurality of second disk drives, a third portion of said second disk drives being related to a third logical volume and a fourth portion of said second disk drives being related to a fourth logical volume;

said second controller having a second information indicating that said third logical volume functions as a logical volume being used to receive data; and

said second controller receiving said data transferred from said first controller and storing said data transferred from said first controller in said third logical volume and storing data corresponding to said data stored in said third logical volume in said fourth logical volume;

wherein said first storage device and said second storage device change said first information and said second information based on at least one command sent from said second information processing device so that said second information processing device sends data targeted to said fourth logical volume, if said first information processing device has a failure,

wherein said changed first information indicates that said second logical volume functions as said logical volume being used to receive data, and

wherein said changed second information indicates that said third logical volume functions as said logical volume being used to transfer data.

55. (Previously Presented) A storage system according to claim 54,
wherein:

said first controller manages a plurality of regions in said second portion of said first disk drives stored data, which will be transferred from said second logical volume to said third logical volume, by using at least one pointer before changing said first information and said second information.

56. (Previously Presented) A storage system according to claim 54,
wherein:

said second controller manages a plurality of regions in said third portion of
said second disk drives stored data, which will be stored from said third logical
volume to said fourth logical volume, before changing said first information and said
second information.

57. (Previously Presented) A storage system according to claim 54,
wherein:

said first controller manages a plurality of regions in said second portion of
said first disk drives stored data, which will be transferred from said second logical
volume to said third logical volume, before changing said first information and said
second information, and

said regions in said second portion of said first disk drives include a plurality of
regions in which said data sent from said first information processing device are
under storing by said first controller.

58. (Previously Presented) A storage system according to claim 54,
wherein:

said second controller manages a plurality of regions in said third portion of
said second disk drives in which said data sent from said first controller are under

storing by said second controller, by at least one pointer before changing said first information and said second information.

59. (Previously Presented) A storage system according to claim 54,
wherein:

said data stored in said second logical volume is appended an update information, which is used to maintain a consistency when said data stored in said third logical volume are stored in said fourth logical volume.

60. (Previously Presented) A storage system according to claim 54,
wherein:

said second logical volume and said third logical volume each function as a journal volume in which a journal data stored.

61. (Previously Presented) A storage system according to claim 54,
wherein:

said command sent from said second information processing device is targeted to said second storage device.

62. (Currently Amended) A storage system, comprising:
a first storage device coupled to a first information processing device and having a first controller and a plurality of first disk drives, a first portion of said first

disk drives being related to a first logical volume and a second portion of said first disk drives being related to a second logical volume; and

a second storage device coupled to a second information processing device and said first storage device and having a second controller and a plurality of second disk drives, a third portion of said second disk drives being related to a third logical volume and a fourth portion of said second disk drives being related to a fourth logical volume;

wherein said storage system has a first status including that

said first logical volume functions as a primary logical volume being stored data sent from a primary information processing device, if said first information processing device functions as said primary information processing device sending data,

said second logical volume functions as a transferring logical volume in which data corresponds to an updated data stored in said primary logical volume are stored,

said third logical volume functions as a receiving logical volume in which data corresponds to said data stored in said transferring logical volume are stored, and

said fourth logical volume functions as a secondary logical volume, which forms a pair relationship of a remote copy process with said primary logical volume and stores data corresponding to said data stored in said receiving logical volume,

wherein said storage system has a second status including that
said fourth logical volume functions as said primary logical volume, if
said second information processing device functions as said primary information
processing device,
said third logical volume functions as said transferring logical volume,
said second logical volume functions as said receiving logical volume,
and
said first logical volume functions as said secondary logical volume;
and

wherein said storage system is changed from said first status to said second
status based on one or more commands sent from said second information
processing device.

63. (Previously Presented) A storage system according to claim 62,
wherein:

said first controller manages a plurality of regions in said second portion of
said first disk drives stored data, which will be transferred from said second logical
volume to said third logical volume, by using at least one pointer during said first
status of said storage system.

64. (Previously Presented) A storage system according to claim 62,
wherein:

said second controller manages a plurality of regions in said third portion of said second disk drives stored data, which will be stored from said third logical volume to said fourth logical volume, during said first status of said storage system.

65. (Previously Presented) A storage system according to claim 62, wherein:

said first controller manages a plurality of regions in said second portion of said first disk drives stored data, which will be transferred from said second logical volume to said third logical volume, during said first status of said storage system, and

said regions in said second portion of said first disk drives include a plurality of regions in which said data sent from said first information processing device are under storing by said first controller.

66. (Previously Presented) A storage system according to claim 62, wherein:

said second controller manages a plurality of regions in said third portion of said second disk drives in which said data sent from said first controller are under storing by said second controller, by at least one pointer during said first status of said storage system.

67. (Previously Presented) A storage system according to claim 62,
wherein:

said data stored in said second logical volume is appended an update
information, which is used to maintain a consistency when said data stored in said
third logical volume are stored in said fourth logical volume.

68. (Previously Presented) A storage system according to claim 62,
wherein:

said second logical volume and said third logical volume each function as a
journal volume in which a journal data stored.

69. (Previously Presented) A storage system according to claim 62,
wherein:

said commands sent from said second information processing device is
targeted to said second storage device.

70. (Previously Presented) A storage system, comprising:
a first storage device coupled to a first information processing device and
having a first controller and a plurality of first disk drives, a first portion of said first
disk drives being related to a first logical volume and a second portion of said first
disk drives being related to a second logical volume; and

a second storage device coupled to a second information processing device and said first storage device and having a second controller and a plurality of second disk drives, a third portion of said second disk drives being related to a third logical volume and a fourth portion of said second disk drives being related to a fourth logical volume;

wherein said storage system has a first status including that

said first logical volume functions as a primary logical volume being stored data sent from a primary information processing device, if said first information processing device functions as said primary information processing device sending data,

said second logical volume functions as a transferring logical volume being stored data, which corresponds to an updated data stored in said primary logical volume and is transferred to said second storage device,

said third logical volume functions as a receiving logical volume being stored data, which is received from said first storage device, and

said fourth logical volume functions as a secondary logical volume, which forms a pair relationship with said primary logical volume and is stored data from said receiving logical volume,

wherein said storage system has a second status including that

said fourth logical volume functions as said primary logical volume, if said second information processing device functions as said primary information processing device,

said third logical volume functions as said transferring logical volume,
said second logical volume functions as said receiving logical volume,
and

said first logical volume functions as said secondary logical volume,
and

wherein said storage system is changed from said first status to said second status if said first information processing device has a failure.

71. (New) A storage system, comprising:

a first storage device coupled to a first information processing device and having a first controller and a plurality of first disk drives, a first portion of said first disk drives being related to a first logical volume and a second portion of said first disk drives being related to a second logical volume; and

a second storage device coupled to said first storage device and having a second controller and a plurality of second disk drives, a third portion of said second disk drives being related to a third logical volume and a fourth portion of said second disk drives being related to a fourth logical volume;

wherein said storage system performs a first asynchronous remote copy process according to a first status in which

said first logical volume functions as a primary logical volume which stores data sent from said first information processing device,

said second logical volume functions as a transferring logical volume which stores data, corresponding to updated data stored in said primary logical volume and to be transferred to said second storage device,

said third logical volume functions as a data storing logical volume in which stores data corresponding to at least one data of an auxiliary logical volume , and

said fourth logical volume functions as said auxiliary logical volume, which forms a pair relationship with said primary logical volume and stores data corresponding to data previously stored in said primary logical volume,

wherein said storage system performs a second asynchronous remote copy process according to a second status in which

said fourth logical volume functions as said primary logical volume,

said third logical volume functions as said transferring logical volume which stores data which is to be transferred to said first storage device,

said second logical volume functions as said data storing logical volume, and

said first logical volume functions as said auxiliary logical volume, and

wherein said storage system is changed from said first status to said second status based on one or more commands.

72. (New) A storage system according to claim 71, wherein:

said first controller manages a plurality of regions in said second logical volume which store data, which will be transferred from said second logical volume to said second storage device, by using at least one pointer during said first status of said storage system.

73. (New) A storage system according to claim 71, wherein:

said second controller manages a plurality of regions in said third logical volume during said first status of said storage system.

74. (New) A storage system according to claim 71, wherein:

said first controller manages a plurality of regions in said second logical volume which store data, which will be transferred from said second logical volume to said second storage device, during said first status of said storage system, and

said regions in said second logical volume include a plurality of regions in which said data sent from said first information processing device are being stored by said first controller.

75. (New) A storage system according to claim 71, wherein:

said second controller manages a plurality of regions in said third logical volume in which said data corresponding to said at least one data of said auxiliary logical volume are stored, during said first status of said storage system.

76. (New) A storage system according to claim 71, wherein:
said data stored in said second logical volume is appended an update information, which is used to maintain a consistency when said data previously stored in said first logical volume are stored in said fourth logical volume.

77. (New) A storage system according to claim 71, wherein:
said second logical volume function as a journal volume in which a journal data is stored.

78. (New) A storage system according to claim 71, wherein:
said one or more commands are targeted to said second storage device.

79. (New) A storage system according to claim 71, wherein:
said transferring logical volume repeatedly stores data corresponding to each updated data stored in said primary logical volume and one or more data stored in said transferring logical volume are repeatedly transferred to said second storage device during said first asynchronous remote copy process.

80. (New) A storage system, comprising:
a first storage device coupled to a first information processing device and having a first controller and a plurality of first disk drives, a first portion of said first

disk drives being related to a first logical volume and a second portion of said first disk drives being related to a second logical volume; and

a second storage device coupled to a second information processing device and said first storage device and having a second controller and a plurality of second disk drives, a third portion of said second disk drives being related to a third logical volume and a fourth portion of said second disk drives being related to a fourth logical volume;

wherein said storage system performs a first asynchronous remote copy process according to a first status in which

said first logical volume functions as a primary logical volume which stores data sent from said first information processing device,

said second logical volume functions as a transferring logical volume which stores data,, corresponding to updated data stored in said primary logical volume and to be transferred to said second storage device,

said third logical volume functions as a data storing logical volume which stores data corresponding to at least one data of an auxiliary logical volume, and

said fourth logical volume functions as said auxiliary logical volume, which forms a pair relationship with said primary logical volume and stores data corresponding to data previously stored in said primary logical volume,

wherein said storage system performs a second asynchronous remote copy process according to a second status in which

said fourth logical volume functions as a substitute for said primary logical volume which stores data sent from said second information processing device,

said third logical volume functions as a substitute for said transferring logical volume which stores data which is to be transferred to said first storage device,

said second logical volume functions as said data storing logical volume, and

said first logical volume functions as said auxiliary logical volume, and wherein said storage system is changed from said first status to said second status if said first information processing device has a failure and/or if at least one of said first storage device or said second storage device receives at least one command.

81. (New) A storage system according to claim 80, wherein:

said first controller manages a plurality of regions in said second logical volume which store data, which will be transferred from said second logical volume to said second storage device, by using at least one pointer during said first status of said storage system.

82. (New) A storage system according to claim 80, wherein:

said second controller manages a plurality of regions in said third logical volume during said first status of said storage system.

83. (New) A storage system according to claim 80, wherein:

said first controller manages a plurality of regions in said second logical volume which store data, which will be transferred from said second logical volume to said second storage device, during said first status of said storage system, and

said regions in said second logical volume include a plurality of regions in which said data sent from said first information processing device are being stored by said first controller.

84. (New) A storage system according to claim 80, wherein:

said second controller manages a plurality of regions in said third logical volume in which said data corresponding to said at least one data of said auxiliary logical volume are stored, during said first status of said storage system.

85. (New) A storage system according to claim 80, wherein:

said transferring logical volume repeatedly stores data corresponding to each updated data stored in said primary logical volume and one or more data stored in said transferring logical volume are repeatedly transferred to said second storage device during said first asynchronous remote copy process.

86. (New) A storage system according to claim 80, wherein:

said storage system is changed from said first status to said second status if at least one of said first storage device or said second storage device receives said at least one command, said at least one command being sent from said second information processing device.

87. (New) A storage system according to claim 86, wherein:

said second storage device, based on said at least one command, changes said fourth logical volume functioning as said auxiliary logical volume to said fourth logical volume functioning as said primary logical volume and changes said third logical volume functioning as said data storing logical volume to said third logical volume functioning as said transferring logical volume, and

said first storage device, based on a communication with said second storage device, changes said first logical volume functioning as said primary logical volume to said first logical volume functioning as said auxiliary logical volume and changes said second logical volume functioning as said transferring logical volume to said second logical volume functioning as said data storing logical volume, said communication being processed based on said at least one command.

88. (New) A storage system, comprising:

a first storage device coupled to a first information processing device and having a first controller and a plurality of first disk drives, a first portion of said first

disk drives being related to a first logical area and a second portion of said first disk drives being related to a second logical area; and

a second storage device coupled to said first storage device and having a second controller and a plurality of second disk drives, a third portion of said second disk drives being related to a third logical area and a fourth portion of said second disk drives being related to a fourth logical area;

wherein said storage system performs a first asynchronous remote copy process according to a first status in which

said first logical area functions as a primary logical volume which stores data sent from said first information processing device,

at least one portion of said second logical area functions as a transferring logical area which stores data, corresponding to updated data stored in said primary logical volume and to be transferred to said second storage device,

at least one portion of said third logical area functions as a data storing logical area which stores data corresponding to at least one data of an auxiliary logical volume, and

said fourth logical area functions as said auxiliary logical volume, which forms a pair relationship with said primary logical volume and which stores data corresponding to data already stored in said primary logical volume,

wherein said storage system performs a second asynchronous remote copy process according to a second status in which

said fourth logical area functions as said primary logical volume,

at least one portion of said third logical area functions as said transferring logical area which stores data which is to be transferred to said first storage device,

at least one portion of said second logical area functions as said data storing logical area, and

said first logical area functions as said auxiliary logical volume, and wherein said storage system is changed from said first status to said second status if at least one of said first storage device or said second storage device receives at least one command.

89. (New) A storage system according to claim 88, wherein:

said first controller manages a plurality of regions in said second logical area which store data, which will be transferred from said at least one portion of said second logical area to said second storage device, by using at least one pointer during said first status of said storage system.

90. (New) A storage system according to claim 88, wherein:

said second controller manages a plurality of regions in said third logical area during said first status of said storage system.

91. (New) A storage system according to claim 88, wherein:

said first controller manages a plurality of regions in said second logical area which store data, which will be transferred from said at least one portion of said second logical area to said second storage device, during said first status of said storage system, and

said regions in said second logical area include a plurality of regions in which said data sent from said first information processing device are being stored by said first controller.

92. (New) A storage system according to claim 88, wherein:

said second controller manages a plurality of regions in said third logical area in which said data corresponding to said at least one data of said auxiliary logical volume are stored, during said first status of said storage system.

93. (New) A storage system according to claim 88, wherein:

said transferring logical area repeatedly stores data corresponding to each updated data stored in said primary logical volume and one or more data stored in said transferring logical area are repeatedly transferred to said second storage device during said first asynchronous remote copy process.

94. (New) A storage system, comprising:

a first storage device coupled to a first information processing device and having a first controller and a plurality of first disk drives, a first portion of said first

disk drives being related to a first logical area and a second portion of said first disk drives being related to a second logical area; and

a second storage device coupled to a second information processing device and said first storage device and having a second controller and a plurality of second disk drives, a third portion of said second disk drives being related to a third logical area and a fourth portion of said second disk drives being related to a fourth logical area;

wherein said storage system performs a first asynchronous remote copy process according to a first status in which

said first logical area functions as a primary logical volume which stores data sent from said first information processing device,

at least one portion of said second logical area functions as a transferring logical area which stores data, corresponding to an updated data stored in said primary logical volume and to be transferred to said second storage device,

at least one portion of said third logical area functions as a data storing logical area which stores data corresponding to at least one data of an auxiliary logical volume, and

said fourth logical area functions as said auxiliary logical volume, which forms a pair relationship with said primary logical volume and which stores data corresponding to data previously stored in said primary logical volume,

wherein said storage system performs a second asynchronous remote copy process according to a second status in which

said fourth logical area functions as a substitute for said primary logical volume which stores data sent from said second information processing device,

at least one portion of said third logical area functions as a substitute for said transferring logical area which stores data which is to be transferred to said first storage device,

at least one portion of said second logical area functions as said data storing logical area, and

said first logical area functions as said auxiliary logical volume, and wherein said storage system is changed from said first status to said second status if said first information processing device has a failure and/or if at least one of said first storage device or said second storage device receives at least one command.

95. (New) A storage system according to claim 94, wherein:

said first controller manages a plurality of regions in said second logical area which store data, which will be transferred from said at least one portion of said second logical area to said second storage device, by using at least one pointer during said first status of said storage system.

96. (New) A storage system according to claim 94, wherein:

said second controller manages a plurality of regions in said third logical area during said first status of said storage system.

97. (New) A storage system according to claim 94, wherein:

said first controller manages a plurality of regions in said second logical area which store data, which will be transferred from said at least one portion of said second logical area to said second storage device, during said first status of said storage system, and

said regions in said second logical area include a plurality of regions in which said data sent from said first information processing device are being stored by said first controller.

98. (New) A storage system according to claim 94, wherein:

said second controller manages a plurality of regions in said third logical area in which said data corresponding to said at least one data of said auxiliary logical volume are stored, during said first status of said storage system.

99. (New) A storage system according to claim 94, wherein:

said transferring logical area repeatedly stores data corresponding to each updated data stored in said primary logical volume and one or more data stored in said transferring logical area are repeatedly transferred to said second storage device during said first asynchronous remote copy process.

100. (New) A storage system according to claim 94, wherein:

said storage system is changed from said first status to said second status if at least one of said first storage device or said second storage device receives said at least one command, said at least one command being sent from said second information processing device.

101. (New) A storage system according to claim 100, wherein:

said second storage device, based on said at least one command, implements said fourth logical area functioning as said primary logical volume instead of said fourth logical area functioning as said auxiliary logical volume and implements said at least one portion of third logical area functioning as said transferring logical area instead of said at least one portion of third logical area functioning as said data storing logical area, and

said first storage device, based on a communication with said second storage device, implements said first logical area functioning as said auxiliary logical volume instead of said first logical area functioning as said primary logical volume and implements said at least one portion of second logical area functioning as said data storing logical area instead of said at least one portion of second logical area functioning as said transferring logical area, said communication being processed based on said at least one command.